

9/350952



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Terms	Documents
L2 and ((authentic\$ with document) same security)	1

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IBM Technical Disclosure Bulletins

Search: L3 Refine Search
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Search History

DATE: Thursday, July 03, 2003 [Printable Copy](#) [Create Case](#)

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
	<i>DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR</i>		
<u>L3</u>	L2 and ((authentic\$ with document) same security)	1	<u>L3</u>
<u>L2</u>	L1 and catalog\$ and database and entry	88	<u>L2</u>
<u>L1</u>	(offer\$ with (buy\$ or purchas\$)) and (offer\$ with (sell\$ or provid\$)) and order\$ and @ad<=19990709	494	<u>L1</u>

END OF SEARCH HISTORY

End of Result Set



Generate Collection

Print

L3: Entry 1 of 1

File: USPT

Feb 6, 2001

DOCUMENT-IDENTIFIER: US 6185683 B1

**** See image for Certificate of Correction ****

TITLE: Trusted and secure techniques, systems and methods for item delivery and execution

Application Filing Date (1):
19981228Brief Summary Text (33):

Some secure facsimile machines such as those used by government and military organizations, or by companies needing a significantly higher level of security provide an extra security/authentication step to ensure that the intended recipient is physically present at the receiving facsimile machine before the sender's machine will transmit the document. In addition, it is possible to use encryption to prevent the facsimile transmitted information from being understood by electronic eavesdroppers. However, such specially equipped facsimile machines tend to be very expensive and are not generally available for common commercial facsimile traffic. Moreover, facsimile machines typically can send and receive documents only--and therefore are not very versatile. They do not, for example, handle digital items such as audio, video, multimedia, and executables, yet these are increasingly part and parcel of communications for commerce and other purposes. Thus, despite its many advantages, facsimile transmissions do not provide the very high degree of trustworthiness and confidence required by extremely confidential documents, nor do they provide the degree of flexibility required by modern digital communications. As with Express Courier Services and Registered Mail, faxing can only indicate that the package was delivered to the intended recipient (or his or her home or place of business)--and not that the intended recipient opened the package or read or saw or used the document.

Brief Summary Text (45):
C. secure database.Brief Summary Text (124):

In addition to multiple individuals and/or parties in several organizations, a trusted go-between may also provide services to parties within a single organization, thus enhancing the security, reliability, auditability, authentication, efficiency, and timeliness of secure document delivery and secure transaction facilitation within a given organization.

Drawing Description Text (39):

FIG. 30 shows an example inter-relationship between and use of the object registration table, subject table and user rights table shown in FIG. 16 secure database;

Drawing Description Text (43):

FIG. 34 shows a specific example of how a site record table and group record table may track portions of the secure database shown in FIG. 16;

Drawing Description Text (46):

FIG. 35 shows an example of a process for updating the secure database;

Drawing Description Text (48):

FIG. 37 shows an example of how an element of the secure database may be accessed;

Drawing Description Text (49):

FIG. 38 is a flowchart example of how to protect a secure database element;

Drawing Description Text (50):

FIG. 39 is a flowchart example of how to back up a secure database;

Drawing Description Text (51):

FIG. 40 is a flowchart example of how to recover a secure database from a backup;

Detailed Description Text (9):

Also as shown in FIG. 89, electronic appliance 600A may optionally include a video camera 4124 and may display remote video in a "window" 4126 on screen 4104 (or on an optionally separate screen not shown). Camera 4124 allows appliance 600 to take a photography of sender 4052 and/or recipient 4056. It may also allow sender 4052 and recipient 4056 to see each other in order to simultaneously authenticate each other's identity visually--and to have a "teleconference" discussion about item 4054 or other matters. The electronic appliance 600 may also have a microphone/speaker 4140 perhaps to coordinate details of the pending transaction. Appliance 600A might also include a media reader 4132 to read from a floppy diskette, smart card or other digital storage device. The appliance 600 can include, in addition, a document shredder/destroyer 4115.

Detailed Description Text (70):

FIG. 101 shows how trusted electronic go-between 4700 can make it easier for parties 4070 to execute a legal contract 4068. In this example, the trusted electronic go-between 4700 can maintain a requirements list 4074. This requirements list 4704 (an example of which is shown in FIG. 101(A) may specify all of the steps that must be completed and all of the conditions that must be satisfied in order to execute legal contract 4068. Trusted electronic go-between 4700 can monitor the electronic communications between the contractual parties 4070A, 4070B, and notify them of additional requirements that need to be met before the contract 4068 can be signed.

Detailed Description Text (73):

It is extremely useful to have trusted go-between 4700 monitoring this activity to order the application of signatures (if required), and to allow a roll back if they system fails before applying all of the signatures. The role of go-between 4700 may, in some circumstances, be played by one of the participant's SPU's 500 (PPEs), since SPU (PPE) behavior is not under the user's control, but rather can be under the control of rules and controls provided by one or more other parties other than the user (although in many instances the user can contribute his or her own controls to operate in combination with controls contributed by other parties). In another example, the go-between role 4700 may comprise a "virtual go-between" comprised of a one, a combination of plural, or all, nodes of participants in a collective or other group. Governance can be shared through the interaction of rules and controls of the various node PPEs producing a go-between control role. Upon the completion of a go-between managed transaction, transaction audit information for archive, billing, security, and/or administrative purposes may be securely transmitted, directly, or through one or more other participating in the virtual go-between.

Detailed Description Text (103):

MD4 or other message digest algorithms employing, for example, one-way hash algorithms that attempt to uniquely identify a sequence of bits that is highly sensitive to content and ordering of bits in a sequence.

Detailed Description Text (139):

The PPE 650's "register recipient" processing may also require input or other interaction from the user. FIGS. 90A and 90B show a relatively straightforward menu-based user interface that may be used to elicit information from sender 4052. In a more advanced example, DTDs 1108 (see FIG. 23 and following) associated with one or more load modules 1100 may be used to control user interfaces (e.g., the "pop up" as shown in FIGS. 72A-72D). In this model, the user interface does not contain any specific visual elements (e.g., menus, buttons, data entry fields, etc.). Instead, the pop up contains application "framework" code. The framework code in this style of user interface uses a structured input stream (DTD 1108) from the PPE 650 to create the visual elements of the interface, and optionally the allowed values of certain fields. This structured data stream may (like other control structure DTDs 1108) be based on SGML, for example.

Detailed Description Text (263):

Electronic controls 400 may also include one or more control methods specifying the type of audit information that is to be maintained in connection with the electronic transaction. This audit information may be used for constructing a receipt 4066, to provide evidence preventing repudiation, and for a variety of other functions. Such audit information may be maintained exclusively within the sender's appliance 600, it might be maintained exclusively within the recipient's appliance secure database, it might be maintained exclusively within the trusted go-between 4700's appliance 600 secure database, or it might be maintained in a combination of any or all of these. Additionally, the audit information may or may not be delivered with item 4054 depending on the particular objectives. A usage clearinghouse 200c as described above in connection with FIG. 1A and/or as disclosed in the Shear et al. patent disclosure may be used to track the audit information based on event-driven or periodic reporting, for example. Audit records could be transmitted to a usage clearinghouse (or to a trusted go-between 4700) by an automatic call forwarding transmission, by a supplement call during transmission, by period update of audit information, by the maintenance of a constant communication line or open network pathway, etc.

Detailed Description Text (280):

As mentioned above, audit information 4077 associated with use of a document may be transmitted to many different parties. Audit information 4077 may also be treated as part of the signaling methodology described for reciprocal methods (see FIGS. 41a-14d) to provide receipts. For example, copies of receipts may be delivered to the sender, as described above, as well as to the sender's manager in a corporate setting, or to the sender's legal counsel or other professional advisors (such as tax advisers, accountants, physicians, etc.) Some items 4054 which are delivered to, or used by, recipients to gather information (such as tax forms, purchase orders, sales reports, and insurance claims) may require delivery of receipts to several parties other than the sender. Some transactions may require the delivery of such receipts before completion. For example, a sales report requesting delivery of products from a company's inventory may require that a receipt from the reading of a document delivered to the sales organization be received by the accounting department for audit purposes before permitting receipt of the document by the sales organization.

Detailed Description Text (291):

For purposes of security and trustedness, PPE 650 may actually "issue" the receipt--although it may use various other portions of appliance 600 (e.g., receipt printer 4112A, display 4104, card/media reader 4108, 4132, etc.) to output the receipt to the sender 4052. PPE 650 may also or alternatively maintain a copy of the receipt information (and/or the audit information 4077 on which it is based) within its secure database 610 (see FIG. 16). The trusted go-between 4700 similarly may maintain a copy of the receipt information (and/or the audit information 4077 on which it is based) within a secure electronic archive 4702.

Detailed Description Text (295):

FIG. 115 shows example steps that PPE 650 may perform in response to a "register object" event. In this particular example, PPE 650 may generate and send any return receipt to sender 4052, trusted electronic go-between 4700, or other parties as required by the control set 4078 within container 302 (FIG. 115, block 4607A)--by for example recording audit records 4077 and transmitting them within an administrative object(s) 870 to the required appliances 600. Appliance 600 may next, if necessary, obtain and locally register any methods, controls or other information required to manipulate object 300 or its contents (FIG. 115, block 4607B; see registration method shown in FIGS. 43a-d). For example, item 4054 may be delivered independently of an associated control set 4078, where the control set may only be partial, such that appliance 600 may require additional controls from permissioning agent 200f (see FIG. 1A and "rights and permissions clearing house" description in the copending Shear et al. patent disclosure) or other archive in order to use the item.

Detailed Description Text (302):

Referring again to FIG. 114A, appliance 600 may next index or otherwise catalog item 4054 for later access and reference (FIG. 114A, block 4618), and may automatically identify document/file format for storage or presentation to recipient 4056 (FIG. 114A, block 4620). Appliance 600 may then select any additional information necessary to allow the recipient 4056 to interact with the document (e.g., conduct any associated database searches or the like) (FIG. 114B, block 4622), and then initiate any associated application(s) and any carrier application required to

interact with the document/file (FIG. 114B, block 4624). Appliance 600 may then generate a "send" or "open" event to PPE 650 requesting the PPE to open container 302 and allow the user to access its contents.

Detailed Description Text (350):
store document into secure database 610.

Detailed Description Text (358):
The control sets 914B, 914A thus define and control the processing which go-between 4700 performs on documents and other items in order to notarize them. Human users may interact with this process if desired through optional user interfaces 4714, 4716. Such human intervention may be required under certain circumstances (for example, if a live human witness might be required to testify as to certain notarization facts, if the automatic processes determine that a fraud is being attempted, etc.). The dynamic interface technology described above can provide a mechanism for delivering a user interface through the system without direct intervention by the provider of the overall service with respect to user interface, and by the notary with respect to the customer relationship.

Detailed Description Text (361):
Trusted electronic go-between 4700 may also archive transmission related data as determined by the electronic control set 4078 associated with the item 4054 being sent, the transaction type and/or sender and/or recipient information (FIG. 121, block 4760). For example, trusted electronic go-between 4700 might automatically determine archiving requirements based at least in part on certified class based identification information regarding sender 4052 and/or recipient 4056. In one example, trusted electronic go-between 4700 archives transmittal related information such as receipt data structure 4066 in an object oriented database employing secure containers 302. It may also perform data reduction analysis and/or authentication processes (FIG. 121, block 4762) to provide client specific, class and/or transaction type usage analysis.

Detailed Description Text (436):
FIG. 126 shows an example of how trusted electronic go-between 4700 might help to coordinate and complete a complex contractual arrangement, such as the purchase of a car. Suppose buyers 4070A want to buy a car from manufacturer 4070B through car dealership 4070C. Buyers 4070A could use an electronic appliance 600 to specify the car model, options and price they are willing to pay. They could also fill out a credit application, provide a down payment, package all of this information into a secure electronic object 300A, and send the electronic container to trusted electronic go-between 4700. Trusted electronic go-between 4700 might then contact the car dealership 4070C, present the buyers' offer and receive (in another secure electronic object 300B) the car dealership's counter offer concerning price and availability. Trusted electronic go-between 4700 could negotiate or mediate between the two parties, and supervise the creation of a contract 68 finalizing the deal. Trusted electronic go-between 4700 could send a copy of the final contract 4068 to the buyers 4070A and to the car dealership 4070C, using secure electronic objects 300C and 300D to ensure secure electronic delivery of this information. Trusted electronic go-between 4700 could include the buyers' down payment within secure object 300D for receipt by car dealership 4070C. Trusted electronic go-between 4700 could also forward the buyers' credit application within yet another secure electronic object 300E to a credit company 4070D. The credit company could provide the proceeds of an automobile loan to car dealership 4070C to pay for the new car. Meanwhile, car dealership 4070C could send an order to the manufacturer 4070B who could manufacture and deliver the new car to the buyers 4070A either directly or through the car dealership 4070C.

Detailed Description Text (446):
This teleconferencing capability can be useful, for example, to allow sender 4052 and recipient 4056 to verify they each are who they say they are, and to assist in negotiating contract 4068 or otherwise discussing the content of an item 4054. In order to further assure the authenticity of the communication, a secure communications link may be established using key exchange techniques (e.g., Diffie-Hellman) and encryption of the signal between the stations.

Detailed Description Text (447):
Secure containers 302 may be used to encapsulate the video and audio being exchanged between electronic kiosk appliances 600, 600' to maintain confidentiality and ensure a high degree of trustedness. Thus, in this example, each secure container 302(2)

might contain some portion of or multiple video images and/or some portion of or multiple audio segments. Electronic appliances 600, 600 can exchange such secure container 302(2) back and forth in rapid succession to provide real time audio and video transmission. In order to improve performance, the containers themselves may remain at the users' sites, and only the encrypted contents transmitted between the participants. This may allow one or two containers to protect the entire communications between the parties.

Detailed Description Text (460):

Trusted go-between 4700 registers the contract 4068, and then creates an electronic list of rules based on contract 4068. A partial example rule list is shown in FIG. 130A. Although the FIG. 130A conditions are shown as being written on a clipboard, in the preferred embodiment the "clipboard" is electronically implemented by a computer and comprises one or more electronic control sets 4078 that specify the conditions that must be satisfied in order for the overall real estate transaction to settle.

Detailed Description Text (461):

Trust go-between 4700 may need to communicate with each of a number of parties in order to determine whether the conditions have been satisfied. For example:

Detailed Description Text (480):

The lawyers 5050, 5052 can also electronically file any of these exchanged documents with the court 5056 by sending the documents to the clerk 5054 via secure electronic containers 302. In this example, the clerk 5054 may actually be a computerized trusted go-between 4700 (represented here by a person but implemented in practice in whole or in part by one or more secure electronic appliances 600). The clerk 5054 may present a digital certificate evidencing that it is authorized to open a secure container 302 it has received. The clerk may then date stamp each received document (this may involve placing a seal 4200 on the document but more typically might involve simply placing a digital time signature on the document). The clerk 5054 may file the document electronically within a secure electronic archive 4702 that can provide a database for linking related documents together.

Detailed Description Text (482):

The judge 5056 could write her orders and opinions using electronic appliance 600. She could then send these documents within a secure electronic container 302(3) for filing by the clerk 5054 in secure electronic archive 4702, and for automatic service on the lawyers 5050, 5052.

Detailed Description Text (493):

Upon receiving the patent application 5062, a trusted go-between 4700 within the Patent Office 5064 could open the container 302(1) and access the patent application 5062. Trusted go-between 4700 could electronically examine the patent application 5062 to ensure it meets all formal requirements, and could also date/time stamp the received patent application in order to document its filing date.

Detailed Description Text (527):

Telecommunications are becoming ubiquitous in post-industrial societies. As a convenience to customers, the trusted go-between could offer many of its services as part of, or in conjunction with providers of telecom services. In one non-limiting example shown in FIG. 134, a trusted go-between 4700 is co-located and integrated with a telephone switch that connects to a telephone or other telecommunications network via wires (or other connections) 5100 (in another example, the switch and trusted-go between 4700 cooperate, but are not co-located). In one example, a person with a laptop 5102 or other computer lacking a PPE 650 wishes nonetheless to take advantage of a subset of secure item delivery services. The computer 5102 is equipped with a fax modem and associated application software. The computer dials a special number which may be an "800" number and is connected to the trusted go-between 4700 who authenticates the sender using a pre-established password and/or stronger methods such as biometric measurements. The sender indicates the telephone number of fax machine to receive the document.

Other Reference Publication (65):

Sean Smith and J.D. Tygar, Signed Vector Timestamps: A Secure Protocol for Partial Order Time, CMU-93-116, School of Computer Science Carnegie Mellon University, Pittsburgh, Pennsylvania, Oct. 1991; version of Feb. 1993, 15 pages.

Other Reference Publication (136):

Special Report, The Internet: Fulfilling the Promise; [redacted]ch, Clifford, The Internet Bringing Order From Chaos; Resnick, Paul, Search the Internet, Hearst, Marti A., Filtering Information on the Internet; Stefik, Mark, Interfaces for Searching the Web; Scientific American, Mar. 1997, pp. 49-56, 62-67, 68-72, 78-81.

Other Reference Publication (138):

The Benefits of RDI for Database Protection and usage Based Billing (Personal Library Software, 1987 or 1988).

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L11: Entry 1 of 1

File: USPT

Mar 14, 2000

DOCUMENT-IDENTIFIER: US 6038601 A

TITLE: Method and apparatus for storing and delivering documents on the internet

Detailed Description Text (124):

Regular expression processing is traditionally slow. Given that caching server performance is extremely important, the ICEXPRESS tag provides a high-speed level of lookup before regular expression matching is performed. The HOST attribute defines a host name to which the expiration applies. Only those URLs with a matching host name are considered for regular expression matching. The host names can be used as keys in a hash table, providing a first level of high-speed lookup. Once the correct host is found, the server can travel through the set of ICEXPRESS regular expressions that apply to that host, until a match is found. Each regular expression is specified with the REGEXP attribute. Once a match is found, the expiration control attributes in the tag are applied to the matching URL, as described in the following sections. The remaining two attributes describe a fixed expiration and a minimum expiration. The uses of these attributes are described in the following sections.

Detailed Description Text (200):

In addition to lookahead configurations that are bound to channel subscriptions, the content provider can have any number of lookahead configurations bound to site (host) name regular expressions. According to one embodiment in order to improve performance, the caching server uses a two-stage lookup mechanism similar to that used by ICEXPRESS tags. In this case the first stage is the host's "domain", i.e. the last two labels of the host name. The domain is stored in a hash table and can be looked up quickly. Whenever a page is looked ahead on, its URL's host name's domain is looked up in the hash table. If an entry is found, all lookahead configurations for that domain have their host name regular expressions compared against the URL's host name. The configuration whose host name regular expression first matches the URL's host name is used to configure lookahead for that URL. The two-stage lookup algorithm thus ensures that domains with no custom lookahead are not slowed by domains with lots of custom lookahead.

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L14: Entry 1 of 1

File: USPT

Aug 21, 2001

US-PAT-NO: 6279112

DOCUMENT-IDENTIFIER: US 6279112 B1

TITLE: Controlled transfer of information in computer networks

DATE-ISSUED: August 21, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Toole, Jr.; James W.	Cambridge	MA		
Gifford; David K.	Weston	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Open Market, Inc.	Cambridge	MA			02

APPL-NO: 08/ 741862 [\[PALM\]](#)

DATE FILED: October 29, 1996

INT-CL: [07] [G06](#) [F](#) [11/30](#)

US-CL-ISSUED: 713/201; 705/14

US-CL-CURRENT: [713/201](#); [705/14](#)

FIELD-OF-SEARCH: 395/187.01, 395/188.01, 395/200.59, 380/21, 380/23, 380/24, 380/25, 713/154, 705/14, 705/51, 705/57, 705/59, 705/77, 705/80

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search All

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5341293	August 1994	Vertelney et al.	
<input type="checkbox"/>	5347632	September 1994	Filepp et al.	
<input type="checkbox"/>	5450593	September 1995	Howell et al.	
<input type="checkbox"/>	5455953	October 1995	Russell	395/739
<input type="checkbox"/>	5490244	February 1996	Isensee et al.	
<input type="checkbox"/>	5586260	December 1996	Hu	395/200.2

<input type="checkbox"/>	<u>5594921</u>	January 1997	Pettus	
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<input type="checkbox"/>	<u>5717923</u>	February 1998	Dedrick	395/613
<input type="checkbox"/>	<u>5724424</u>	March 1998	Gifford	380/24
<input type="checkbox"/>	<u>5761648</u>	June 1998	Golden et al.	705/14
<input type="checkbox"/>	<u>5809242</u>	September 1998	Shaw et al.	395/200.47
<input type="checkbox"/>	<u>5838790</u>	November 1998	McAuliffe et al.	380/4
<input type="checkbox"/>	<u>5948061</u>	September 1999	Merriman et al.	709/219

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 97/15885	May 1997	WO	

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Open Market, Inc.; OM Express.TM. Information Area;
<http://www.openmarket.com/express>; Jul. 29, 1996.

ART-UNIT: 275

PRIMARY-EXAMINER: Beausoliel, Jr.; Robert W.

ASSISTANT-EXAMINER: Baderman; Scott T.

ATTY-AGENT-FIRM: Fish & Richardson P.C.

ABSTRACT:

The present invention relates to techniques for controlling transfers of information in computer networks. One technique involves transmitting from a server computer to a client computer a document containing a channel object corresponding to a communication service, and storing an access ticket that indicates that a user of the client computer permits the information source computer to communicate with the user over a specified channel. Another technique involves transmitting smart digital offers based on information such as coupons and purchasing histories stored at the computer receiving the offer. Another technique involves transmitting from a server computer to a client computer a request for a user's personal profile information, and activating a client avatar that compares the request for personal profile information with a security profile of the user limiting access to personal profile information. Another technique involves transmitting from a server computer to a client computer a document containing an embedded link, activating the embedded link at the client computer and recording activation of the embedded link in a metering log.

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L14: Entry 1 of 1

File: USPT

Aug 21, 2001

DOCUMENT-IDENTIFIER: US 6279112 B1

TITLE: Controlled transfer of information in computer networks

Detailed Description Text (31):

Referring to FIG. 6, in operation of the network-based system of FIG. 5 the client computer obtains a document from the server computer that contains an offer/catalog description record (step 212) corresponding to an offer or catalog that will be sent to the client computer. The offer/catalog description record contains a profile query specifying the kinds of profile information that will be useful to the server computer in constructing a client-specific offer or in dynamically customizing the content of a catalog to be transmitted to the client computer. The offer/catalog description record also identifies the supplier of the record and the server computer to which the profile information should be sent, and contains the supplier's authenticating signature. Receipt of the offer/catalog description record by the client computer activates the client avatar (step 214). The client avatar compare the profile query in the offer/catalog description record with the security profile, which restricts the domain of profile information against which the profile query is processed (step 216).

Detailed Description Text (32):

If the profile query requests information that the security profile restricts only to trusted servers, then the client avatar determines whether the server computer is one of the trusted servers and, if so, checks the authenticating signature contained in the offer/catalog description record (step 217) (the client avatar may assume that if the supplier of the record is a trusted supplier, then the server should be trusted too). If the profile query requests information that, according to the security profile, requires user authorization for release, then the client avatar prompts the user for authorization to release the information to the server computer (step 218) and the user indicates whether release of the information is authorized (step 220). Ordinarily, the user will not be prompted for authorization to release information to a trusted server, but the security profile can nevertheless be configured to require this for certain information.

Current US Cross Reference Classification (1):705/14[Previous Doc](#)[Next Doc](#)[Go to Doc#](#)

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L11: Entry 1 of 1

File: USPT

Feb 11, 2003

US-PAT-NO: 6519571

DOCUMENT-IDENTIFIER: US 6519571 B1

TITLE: Dynamic customer profile management

DATE-ISSUED: February 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Guheen; Michael F.	Tiburon	CA		
Mitchell; James D.	Manhattan Beach	CA		
Barrese; James J.	San Jose	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Accenture LLP	Chicago	IL			02

APPL-NO: 09/ 321273 [\[PALM\]](#)

DATE FILED: May 27, 1999

INT-CL: [07] [G06 F 17/60](#)

US-CL-ISSUED: 705/14

US-CL-CURRENT: [705/14](#)

FIELD-OF-SEARCH: 705/1, 705/10, 705/14, 700/17, 700/83, 379/10, 379/14, 379/29

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected](#)[Search ALL](#)[Clear](#)

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/> 4674043	June 1987	Hernandez et al.	
<input type="checkbox"/> 4937863	June 1990	Robert et al.	
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<input type="checkbox"/> 5537314	July 1996	Kanter	705/14
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<input type="checkbox"/> <u>5765142</u>	June 1998	Allred et al.	705/26
<input type="checkbox"/> <u>5799151</u>	August 1998	Hoffer	
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<input type="checkbox"/> <u>6014638</u>	January 2000	Burge et al.	705/14 X
<input type="checkbox"/> <u>6236990</u>	May 2001	Geller et al.	707/5

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ABSTRACT:

The present invention is provided for utilizing various types of user indicia such as search requests, products purchased, products looked at but not purchased, products purchased and returned, reasons for returning products, customers stated profile including income level, education level, stated profession, etc. for the purpose of customizing a user interface.

17 Claims, 177 Drawing figures

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File: USPT

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DOCUMENT-IDENTIFIER: US 6519571 B1

TITLE: Dynamic customer profile management

Application Filing Date (1):19990527Detailed Description Text (27):

Referring again to operation 28 of FIG. 1, and more particularly to FIGS. 18 and FIGS. 27-34, it is seen that FIG. 27 provides an exemplary pictorial representation of various components of a web architecture framework, each component being represented by a box. Three business entities are represented in this example as Business1, Business2, and Business3. Each business entity has a unique indicia coding, as shown in the legend. Indicia coding is provided in each component box that has related products or services offered by a business entity. For example, in the Security Services section, the Browser Based Authentication component has all three types of indicia coding. Thus, all three of the business entities provide products or services related to that component. Also in the Security Services section, the Virtual Private Networks component has only two types of indicia coding. Referring to the legend, it is seen that only Business1 and Business2 offer products or services related to that particular component. For clarity, FIGS. 28, 30, and 32 are provided to illustrate the products or services offered by each individual entity.

Detailed Description Text (77):

The evolution of new technologies and expanded access to a virtual world has increased the security risk of conducting business. It is therefore essential to recognize the need for a new unit in the organization, specifically dedicated to ensuring that security is handled appropriately. At the Program level, the Security Management unit needs to: Ensure all security issues are effectively addressed throughout the program (all business and IT processes). Act as facilitator and approving body for all new and existing initiatives that contain security components. Own responsibility for the organization and facilitation of working groups that would address security issues. Be responsible for development and maintenance of the Security Plan.

Detailed Description Text (159):

In order to ensure the security of the system, periodical security audits should be arranged, in order to verify that the processes and architecture and application components that are being developed conform to security proven practices. This may be done by an external body specializing in security (such as Global TIS--Security) in the form of interviews, architecture and code reviews, and automated tool assessment.

Detailed Description Text (485):

Video conferencing is an advantage when one person needs to see the other person's face, his or her reactions, read body-language, build relationships, and so on. On the other hand, when communication is more technical, for example, fixing a bug, collaborative design, document writing, or presenting a demonstration, it is more

critical to be able to see what the other person is seeing, or to be able to show information at hand. In this case, application sharing assumes greater importance. It is a common misconception that video conferencing replaces working in the same place. The logistics involved in setting up a group video conference for different time zones, and the complexity of sharing a common whiteboard, limit the value of the solution to occasional situations. In a development environment, the real value of synchronous communication is not in being able to see someone else at the other end, it is in being able to share a working session on a work object.

Detailed Description Text (514):

Security Management tools include: Intrusion detection--discovers and alerts administrators of intrusion attempts. Network assessment--performs scheduled and selective probes of the network's communication services, operating systems, and routers in search of those vulnerabilities most often used by unscrupulous individuals to probe, investigate, and attack your network. Platform security--minimizes the opportunities for intruders to compromise corporate systems by providing additional operating system security features. Web-based access control--enables organizations to control and manage user access to web based applications with restricted access. Fraud services--methods of verifying the identity of credit card users to reduce the amount of fraudulent credit card transactions. Mobile code security--protects corporate resources, computer files, confidential information, and corporate assets from possible mobile code attack. E-mail content filtering--allows organizations to define and enforce e-mail policies to ensure the appropriate email content. Application development security toolkits--allow programmers to integrate privacy, authentication, and additional security features into applications by using a cryptography engine and toolkit. Encryption--provides confidential communications to prevent the disclosure of sensitive information as it travels over the network. This capability is essential for conducting business over an unsecured channel such as the Internet. Public key infrastructure--provides public-key encryption and digital signature services. The purpose of a public-key infrastructure is to manage keys and certificates. A PKI enables the use of encryption, digital signatures, and authentication services across a wide variety of applications. Authentication system--provides a business with the ability to accurately know who they are conducting business with. Firewall--protects against theft, loss, or misuse of important data on the corporate network, as well as protection against attempted denial of service attacks. Firewalls may be used at various points in the network to enforce different security policies.

Detailed Description Text (650):

Configuration Management tools are needed once the system becomes large and many modules (which may include programs, header files, copybooks, shared components, subroutines, and so on) have to be managed. There is a significant cost involved in formal configuration management. If the system has a little over 100 modules, the Configuration Management component may consist merely of a whiteboard or Excel spreadsheet. As the number of modules grows to about 1000, a dedicated tool is required.

Detailed Description Text (2038):

In addition, several other relevant standards exist including: ISDN Integrated Services Digital Network, the digital communication standard for transmission of voice, video and data on a single communications link. RTP Real-Time Transport Protocol, an Internet Standard Protocol for transmission of real-time data like voice and video over unicast and multicast networks. IP Internet Protocol, an Internet Standard Protocol for transmission and delivery of data packets on a packet switched network of interconnected computer systems. PPP Point-to-Point Protocol MPEG Motion Pictures Expert Group, a standards body under the International Standards Organization(ISO), Recommendations for compression of digital Video and Audio including the bit stream but not the compression algorithms. SLIP Serial Line Internet Protocol RSVP Resource Reservation Setup Protocol UDP User Datagram Protocol

Detailed Description Text (2069):

WAF supports a general purpose foundation for secure transaction management, including usage control, auditing, reporting, and/or payment. This general purpose foundation is called "WAF Functions" ("WAFFs"). WAF also supports a collection of "atomic" application elements (e.g., load modules) that can be selectively aggregated together to form various WAFF capabilities called control methods and which serve as WAFF applications and operating system functions. When a host operating environment of an electronic appliance includes WAFF capabilities, it is called a "Rights Operating System" (ROS). WAFF load modules, associated data, and methods form a body of information that for the purposes of the present invention are called "control information." WAFF control information may be specifically associated with one or more pieces of electronic content and/or it may be employed as a general component of the operating system capabilities of a WAF installation.

Detailed Description Text (2070):

WAFF transaction control elements reflect and enact content specific and/or more generalized administrative (for example, general operating system) control information. WAFF capabilities which can generally take the form of applications (application models) that have more or less configurability which can be shaped by WAF participants, through the use, for example, of WAF templates, to employ specific capabilities, along, for example, with capability parameter data to reflect the elements of one or more express electronic agreements between WAF participants in regards to the use of electronic content such as commercially distributed products. These control capabilities manage the use of, and/or auditing of use of, electronic content, as well as reporting information based upon content use, and any payment for said use. WAFF capabilities may "evolve" to reflect the requirements of one or more successive parties who receive or otherwise contribute to a given set of control information. Frequently, for a WAF application for a given content model (such as distribution of entertainment on CD-ROM, content delivery from an Internet repository, or electronic catalog shopping and advertising, or some combination of the above) participants would be able to securely select from amongst available, alternative control methods and apply related parameter data, wherein such selection of control method and/or submission of data would constitute their "contribution" of control information. Alternatively, or in addition, certain control methods that have been expressly certified as securely interoperable and compatible with said application may be independently submitted by a participant as part of such a contribution. In the most general example, a generally certified load module (certified for a given WAF arrangement and/or content class) may be used with many or any WAF application that operates in nodes of said arrangement. These parties, to the extent they are allowed, can independently and securely add, delete, and/or otherwise modify the specification of load modules and methods, as well as add, delete or otherwise modify related information.

Detailed Description Text (2093):

Referring to operation 1500 of FIG. 66, one embodiment of the electronic commerce component of the present invention is provided for allowing purchase of products and services via a display catalog. The display catalog may display linkable pictures, such as visual representations of products for sale. The display catalog may also display linkable text which could represent a product or family of products, as well as services offered. Other linkable text or pictures could be implemented to provide multiple ways to traverse the display catalog to ease navigation along a page or between various pages. An exemplary link would include at least one textual or picture link displayed on each page of the display catalog that would permit a user to purchase the good or service shown on that page or associated with a particular good or service displayed on the page. Such link may resemble a shopping cart.

Detailed Description Text (2099):

As shown in FIG. 67, one embodiment of the electronic commerce component of the present invention is provided for facilitating a virtual shopping transaction. First, a plurality of items, i.e. products or services, are selected from a database and displayed for purchase in operation 1600. Preferably, the items are displayed in an electronic catalog format. Next, in operation 1602, a user is allowed to select a predetermined set of the items for purchase. For example, each of the items could include a liked picture or text, which a user would then simply click on with a mouse pointer to select the items. Other options include scrollable menus, etc. In operation 1604, a payment is then accepted in exchange for the predetermined set of items. Such predetermined set of items is then stored in operation 1606, thereby allowing the user to collectively select the predetermined set of items at a later time without having to select each of the items individually. Note operation 1608. The selected items are preferably stored in a database unique to the user. The set of items selected during each shopping session should be stored in a separate listing or file so that the user can individually select particular sets of items. Optionally, the user may be allowed to name each stored set of items for easier identification later. The user may also be permitted to rate or rank the items of a selected set for purposes of refreshing the user's memory when the user later retrieves the set.

Detailed Description Text (2103):

The elements which constitute the shopping basket are a shopping basket main body (purchase list) and a function for taking in and out items for the shopping basket. As functions associated with the shopping basket, there are a function to take the items into the shopping basket (add to the purchase list), a function to check the contents of the shopping basket (display the purchase list), a function to return the item in the shopping basket (change the purchase list) and a function to purchase the items in the shopping basket. However, for the function to purchase the items, only the order is accepted because the delivery of the items is made later except a portion of items which can be downloaded as digital data and the shopping is not completed until the items are received and the account is settled.

Detailed Description Text (2108):

In accordance with the present invention, an interface for providing the shopping basket function is provided as a separate shopping basket window from a catalog window on which online shop item data is displayed. The shopping basket window is displayed on the catalog window and a display position is moved in linkage with the movement of a mouse pointer. The shopping basket includes a list of items to be purchased which is a main body of the shopping basket, a function to add the item data to the list, and a function to change the item data registered in the list. In one embodiment of the present invention, the shopping basket main body is not always displayed. Instead, an interface function to display the shopping basket contents on the screen is provided on the shopping basket window.

Detailed Description Text (2118):

To meet this need, several companies have developed computer architectures for online electronic catalog sales using, for example, the Internet as a transport mechanism to transmit data representing purchase requests between a proprietary browser and server product pair.

Detailed Description Text (2120):

Another company, Open Market, is developing a similar electronic catalog system consisting of a HyperText Markup Language (HTML) authoring tool (called Storebuilder), and a server (called WebServer) connected to an integrated back-end commerce system (called TransactionLink). This system appears to share similar characteristics and disadvantages as the Netscape system.

Detailed Description Text (2135):

It is desirable for a computer operated under the control of a merchant to obtain information offered by a customer and transmitted by a computer operating under the

control of the customer over a publicly accessible packet-switched network (e.g., the Internet) to the computer operating under the control of the merchant, without risking the exposure of the information to interception by third parties that have access to the network, and to assure that the information is from an authentic source. It is further desirable for the merchant to transmit information, including a subset of the information provided by the customer, over such a network to a payment gateway computer system that is designated, by a bank or other financial institution that has the responsibility of providing payment on behalf of the customer, to authorize a commercial transaction on behalf of such a financial institution, without the risk of exposing that information to interception by third parties. Such institutions include, for example, financial institutions offering credit or debit card services.

Detailed Description Text (2248):

The second aspect of the invention is the governing logic for controlling system dynamics. This logic is stored in system memory and provides the sequence of protocols and rules that allocate trading priority, and the system responses to operative commands entered by the brokers at the workstations. The system logic is critical on two levels. First, it is important as the guiding principles underlying the system and thus performance is tied directly thereto. On a second level, system logic must be known to all customers and traders as the rules dictating market access and response--to eliminate any confusion and to place participants on as close to an equal footing as possible. It is a fundamental precept of the present system to provide fair and complete access to the trading process to all registered participants.

Detailed Description Text (2311):

WAF may be used to migrate most non-electronic, traditional information delivery models (including entertainment, reference materials, catalog shopping, etc.) into an adequately secure digital distribution and usage management and payment context. The distribution and financial pathways managed by a WAF arrangement may include: content creator(s), distributor(s), redistributor(s), client administrator(s), client user(s), financial and/or other clearinghouse(s), and/or government agencies.

Detailed Description Text (2322):

Control information may be provided by a party who does not directly participate in the handling of electronic content (and/or appliance) and/or control information for such content (and/or appliance). Such control information may be provided in secure form using WAF installation secure sub-system managed communications (including, for example, authenticating the deliverer of at least in part encrypted control information) between such not directly participating one or more parties' WAF installation secure subsystems, and a pathway of WAF content control information participant's WAF installation secure subsystem. This control information may relate to, for example, the right to access credit supplied by a financial services provider, the enforcement of regulations or laws enacted by a government agency, or the requirements of a customer of WAF managed content usage information (reflecting usage of content by one or more parties other than such customer) relating to the creation, handling and/or manner of reporting of usage information received by such customer. Such control information may, for example, enforce societal requirements such as laws related to electronic commerce.

Detailed Description Text (2325):

Normally, most usage, audit, reporting, payment, and distribution control methods are themselves at least in part encrypted and are executed by the secure subsystem of a WAF installation. Thus, for example, billing and metering records can be securely generated and updated, and encryption and decryption keys are securely utilized, within a secure subsystem. Since WAF also employs secure (e.g. encrypted and authenticated) communications when passing information between the participant location (nodes) secure subsystems of a WAF arrangement, important components of a

WAF electronic agreement can be reliably enforced with sufficient security (sufficiently trusted) for the intended commercial purposes. A WAF electronic agreement for a value chain can be composed, at least in part, of one or more subagreements between one or more subsets of the value chain participants. These subagreements are comprised of one or more electronic contract "compliance" elements (methods including associated parameter data) that ensure the protection of the rights of WAF participants.

Detailed Description Text (2326):

The degree of trustedness of a WAF arrangement will be primarily based on whether hardware SPUs are employed at participant location secure subsystems and the effectiveness of the SPU hardware security architecture, software security techniques when an SPU is emulated in software, and the encryption algorithm(s) and keys that are employed for securing content, control information, communications, and access to WAF node (WAF installation) secure subsystems. Physical facility and user identity authentication security procedures may be used instead of hardware SPUs at certain nodes, such as at an established financial clearinghouse, where such procedures may provide sufficient security for trusted interoperability with a WAF arrangement employing hardware SPUs at user nodes.

Detailed Description Text (2466):

There has been some research pioneered by W. C. Sheldon at Harvard in the 1930's and 40's, on the correlation between body type and learning characteristics. (Smith, 1949, pp. 310-320). Sheldon delineated three body types, based on the embryonic source of tissue: ectomorph (tall and skinny), mesomorph (compact and muscular) and endomorph (large and or overweight).

Detailed Description Text (2473):

There is much written in educational psychology about learning styles, usually referred to as "cognitive styles." Cognitive style, or learning style, refers to the way in which a student prefers to organize his or her thought processes--his or her preferred mode of thinking. There are a few different approaches which could be used, but by far the largest body of research shows that learning style preferences usually fall into one of two groups, stereotyped as artistic or scientific thinking.

Detailed Description Text (2532):

In a traditional case, where goods are introduced to a customer in a traditional way, that is, through a catalog sent via traditional mail (not electronic mail) and so forth, or through other media, without using an online communication system, If the customer has a question about the introduced goods, the customer may directly call a company or the like which handles the goods and inquire thereof about the goods. In such a case, the customer tells the company the trade names, article identification numbers, and so forth, of the goods. Then, the customer may obtain an answer as to how to use the goods, a payment method when buying the goods, and so forth, from a person in the customer service division in the company.

Detailed Description Text (2566):

Referring to FIG. 88, operation 2700 allows browser-based authentication with user verification data. In operation 2702, access is granted to application and/or system data based on the user verification data, which may be stored in a user's browser. Virtual private networking is provided in operation 2704. Rights and Control Information

Detailed Description Text (2590):

WAF, for example, can employ: (1) Secure metering means for budgeting and/or auditing electronic content and/or appliance usage; (2) Secure flexible means for enabling compensation and/or billing rates for content and/or appliance usage, including electronic credit and/or currency mechanisms for payment means; (3) Secure distributed database means for storing control and usage related information

(and employing validated compartmentalization and tagging schemes); (4) Secure electronic appliance control means; (5) A distributed, secure, "virtual black box" comprised of nodes located at every user (including WAF content container creators, other content providers, client users, and recipients of secure WAF content usage information) site. The nodes of said virtual black box normally include a secure subsystem having at least one secure hardware element (a semiconductor element or other hardware module for securely executing WAF control processes), said secure subsystems being distributed at nodes along a pathway of information storage, distribution, payment, usage, and/or auditing. In some embodiments, the functions of said hardware element, for certain or all nodes, may be performed by software, for example, in host processing environments of electronic appliances; (6) Encryption and decryption means; (7) Secure communications means employing authentication, digital signaturing, and encrypted transmissions. The secure subsystems at said user nodes utilize a protocol that establishes and authenticates each node's and/or participant's identity, and establishes one or more secure host-to-host encryption keys for communications between the secure subsystems; and (8) Secure control means that can allow each WAF installation to perform WAF content authoring (placing content into WAF containers with associated control information), content distribution, and content usage; as well as clearinghouse and other administrative and analysis activities employing content usage information.

Detailed Description Text (2595):

Browser Based Authentication Verifies user identity using built-in browser functionality Maintains authentication information throughout sessions Utilizes centralized directory of profiles Provides LDAP compatibility Provides NDS compatibility

Detailed Description Text (2596):

The security component of the present invention verifies user identity using built-in browser functionality, allowing for immediate access to a user without requiring installation of additional software. Authentication information may be maintained throughout selected or all sessions to prevent unauthorized users from accessing resources through a registered user's connection.

Detailed Description Text (2616):

Remote Access Services (Radius) Enables high density modem pooling Provides a single dial-in number for ISDN, or Analog calls and an automatic back-up number if first one does not work Creates an Integrated Firewall/authentication Allows remote authenticated access to intranet

Detailed Description Text (2617):

High density modem pooling is performed by the network services component of the present invention. Also provided are a single dial-in number for ISDN or Analog calls and an automatic back-up number if the first number does not work or returns a busy signal. Optionally, an integrated firewall may be created or authorization may be verified through authentication. Also optionally, remote authenticated access to intranet may be allowed.

Detailed Description Text (2643):

As shown in component 1420 of FIG. 65, one embodiment of the present invention is provided for affording a plurality of client service-related services. Referring to FIG. 91, among the features included are managing client verification data for user authentication purposes in a network framework in operation 3000. In operation 3002, electronic mail capabilities in the network framework are provided. Network framework browsing in the network framework is provided in operation 3004. File transfer capabilities in the network framework, news reader capabilities in the network framework, and chat room capabilities in the network framework are provided in operations 3006, 3008, and 3010, respectively. Playback capabilities in the network framework are enabled in operation 3012. Financial transactional capabilities in the network framework are also provided. Note operation 3014.

Detailed Description Text (2644):

Certificates Manages client certificates for user authentication

Detailed Description Text (2645):

The client services component of the present invention manages client certificates used for user authentication. These include certificates used to identify a user during automatic log on.

Detailed Description Text (2737):

support low-cost, efficient, and effective security architectures for transaction control, auditing, reporting, and related communications and information storage. WAF may employ tagging related security techniques, the time-ageing of encryption keys, the compartmentalization of both stored control information (including differentially tagging such stored information to ensure against substitution and tampering) and distributed content (to, for many content applications, employ one or more content encryption keys that are unique to the specific WAF installation and/or user), private key techniques such as triple DES to encrypt content, public key techniques such as RSA to protect communications and to provide the benefits of digital signature and authentication to securely bind together the nodes of a WAF arrangement, secure processing of important transaction management executable code, and a combining of a small amount of highly secure, hardware protected storage space with a much larger "exposed" mass media storage space storing secured (normally encrypted and tagged) control and audit information. WAF employs special purpose hardware distributed throughout some or all locations of a WAF implementation: a) said hardware controlling important elements of: content preparation (such as causing such content to be placed in a WAF content container and associating content control information with said content), content and/or electronic appliance usage auditing, content usage analysis, as well as content usage control; and b) said hardware having been designed to securely handle processing load module control activities, wherein said control processing activities may involve a sequence of required control factors;

Detailed Description Text (2750):

employ "templates" to ease the process of configuring capabilities of the present invention as they relate to specific industries or businesses. Templates are applications or application add-ons under the present invention. Templates support the efficient specification and/or manipulation of criteria related to specific content types, distribution approaches, pricing mechanisms, user interactions with content and/or administrative activities, and/or the like. Given the very large range of capabilities and configurations supported by the present invention, reducing the range of configuration opportunities to a manageable subset particularly appropriate for a given business model allows the full configurable power of the present invention to be easily employed by "typical" users who would be otherwise burdened with complex programming and/or configuration design responsibilities template applications can also help ensure that WAF related processes are secure and optimally bug free by reducing the risks associated with the contribution of independently developed load modules, including unpredictable aspects of code interaction between independent modules and applications, as well as security risks associated with possible presence of viruses in such modules. WAF, through the use of templates, reduces typical user configuration responsibilities to an appropriately focused set of activities including selection of method types (e.g. functionality) through menu choices such as multiple choice, icon selection, and/or prompting for method parameter data (such as identification information, prices, budget limits, dates, periods of time, access rights to specific content, etc.) that supply appropriate and/or necessary data for control information purposes. By limiting the typical (non-programming) user to a limited subset of configuration activities whose general configuration environment (template) has been preset to reflect general requirements corresponding to that user, or a content or other business model can very substantially limit

difficulties associated with content containerization (including placing initial control information on content), distribution, client administration, electronic agreement implementation, end-user interaction, and clearinghouse activities, including associated interoperability problems (such as conflicts resulting from security, operating system, and/or certification incompatibilities). Use of appropriate WAF templates can assure users that their activities related to content WAF containerization, contribution of other control information, communications, encryption techniques and/or keys, etc. will be in compliance with specifications for their distributed WAF arrangement. WAF templates constitute preset configurations that can normally be reconfigurable to allow for new and/or modified templates that reflect adaptation into new industries as they evolve or to reflect the evolution or other change of an existing industry. For example, the template concept may be used to provide individual, overall frameworks for organizations and individuals that create, modify, market, distribute, consume, and/or otherwise use movies, audio recordings and live performances, magazines, telephony based retail sales, catalogs, computer software, information data bases, multimedia, commercial communications, advertisements, market surveys, infomercials, games, CAD/CAM services for numerically controlled machines, and the like. As the context surrounding these templates changes or evolves, template applications provided under the present invention may be modified to meet these changes for broad use, or for more focused activities. A given WAF participant may have a plurality of templates available for different tasks. A party that places content in its initial WAF container may have a variety of different, configurable templates depending on the type of content and/or business model related to the content. An end-user may have different configurable templates that can be applied to different document types (e-mail, secure internal documents, database records, etc.) and/or subsets of users (applying differing general sets of control information to different bodies of users, for example, selecting a list of users who may, under certain preset criteria, use a certain document). Of course, templates may, under certain circumstances have fixed control information and not provide for user selections or parameter data entry.

Detailed Description Text (2754):

provide mechanisms that allow control information to "evolve" and be modified according, at least in part, to independently, securely delivered further control information. Said control information may include executable code (e.g., load modules) that has been certified as acceptable (e.g., reliable and trusted) for use with a specific WAF application, class of applications, and/or a WAF distributed arrangement. This modification (evolution) of control information can occur upon content control information (load modules and any associated data) circulating to one or more WAF participants in a pathway of handling of control information, or it may occur upon control information being received from a WAF participant. Handlers in a pathway of handling of content control information, to the extent each is authorized, can establish, modify, and/or contribute to, permission, auditing, payment, and reporting control information related to controlling, analyzing, paying for, and/or reporting usage of, electronic content and/or appliances (for example, as related to usage of WAF controlled property content). Independently delivered (from an independent source which is independent except in regards to certification), at least in part secure, control information can be employed to securely modify content control information when content control information has flowed from one party to another party in a sequence of WAF content control information handling. This modification employs, for example, one or more WAF component assemblies being securely processed in a WAF secure subsystem. In an alternate embodiment, control information may be modified by a senior party through use of their WAF installation secure sub-system after receiving submitted, at least in part secured, control information from a "junior" party, normally in the form of a WAF administrative object. Control information passing along WAF pathways can represent a mixed control set, in that it may include: control information that persisted through a sequence of control information handlers, other control information that was allowed to be modified, and further control information

representing new control information and/or mediating data. Such a control set represents an evolution of control information for disseminated content. In this example the overall content control set for a WAF content container is "evolving" as it securely (e.g. communicated in encrypted form and using authentication and digital signaturing techniques) passes, at least in part, to a new participant's WAF installation where the proposed control information is securely received and handled. The received control information may be integrated (through use of the receiving parties' WAF installation secure sub-system) with in-place control information through a negotiation process involving both control information sets. For example, the modification, within the secure sub-system of a content provider's WAF installation, of content control information for a certain WAF content container may have occurred as a result of the incorporation of required control information provided by a financial credit provider. Said credit provider may have employed their WAF installation to prepare and securely communicate (directly or indirectly) said required control information to said content provider. Incorporating said required control information enables a content provider to allow the credit provider's credit to be employed by a content end-user to compensate for the end-user's use of WAF controlled content and/or appliances, so long as said end-user has a credit account with said financial credit provider and said credit account has sufficient credit available. Similarly, control information requiring the payment of taxes and/or the provision of revenue information resulting from electronic commerce activities may be securely received by a content provider. This control information may be received, for example, from a government agency. Content providers might be required by law to incorporate such control information into the control information for commercially distributed content and/or services related to appliance usage. Proposed control information is used to an extent allowed by senior control information and as determined by any negotiation trade-offs that satisfy priorities stipulated by each set (the received set and the proposed set). WAF also accommodates different control schemes specifically applying to different participants (e.g., individual participants and/or participant classes (types)) in a network of WAF content handling participants.

Detailed Description Text (2766):

support the operation of a plurality of clearinghouses, including, for example, both financial and user clearinghouse activities, such as those performed by a client administrator in a large organization to assist in the organization's use of a WAF arrangement, including usage information analysis, and control of WAF activities by individuals and groups of employees such as specifying budgets and the character of usage rights available under WAF for certain groups of and/or individual, client personnel, subject to control information series to control information submitted by the client administrator. At a clearinghouse, one or more WAF installations may operate together with a trusted distributed database environment (which may include concurrent database processing means). A financial clearinghouse normally receives at its location securely delivered content usage information, and user requests (such as requests for further credit, electronic currency, and/or higher credit limit). Reporting of usage information and user requests can be used for supporting electronic currency, billing, payment and credit related activities, and/or for user profile analysis and/or broader market survey analysis and marketing (consolidated) list generation or other information derived, at least in part, from said usage information. This information can be provided to content providers or other parties, through secure, authenticated encrypted communication to the WAF installation secure subsystems. Clearinghouse processing means would normally be connected to specialized I/O means, which may include high speed telecommunication switching means that may be used for secure communications between a clearinghouse and other WAF pathway participants.

Detailed Description Text (2772):

support smart card implementations of the present invention in the form of portable electronic appliances, including cards that can be employed as secure credit, banking, and/or money cards. A feature of the present invention is the use of

portable WAFs as transaction cards at retail and other establishments, wherein such cards can "dock" with an establishment terminal that has a WAF secure sub-system and/or an online connection to a WAF secure and/or otherwise secure and compatible subsystem, such as a "trusted" financial clearinghouse (e.g., VISA, Mastercard). The WAF card and the terminal (and/or online connection) can securely exchange information related to a transaction, with credit and/or electronic currency being transferred to a merchant and/or clearinghouse and transaction information flowing back to the card. Such a card can be used for transaction activities of all sorts. A docking station, such as a PCMCIA connector on an electronic appliance, such as a personal computer, can receive a consumer's WAF card at home. Such a station/card combination can be used for on-line transactions in the same manner as a WAF installation that is permanently installed in such an electronic appliance. The card can be used as an "electronic wallet" and contain electronic currency as well as credit provided by a clearinghouse. The card can act as a convergence point for financial activities of a consumer regarding many, if not all, merchant, banking, and on-line financial transactions, including supporting home banking activities. A consumer can receive his paycheck and/or investment earnings and/or "authentic" WAF content container secured detailed information on such receipts, through on-line connections. A user can send digital currency to another party with a WAF arrangement, including giving away such currency. A WAF card can retain details of transactions in a highly secure and database organized fashion so that financially related information is both consolidated and very easily retrieved and/or analyzed. Because of the WAF security, including use of effective encryption, authentication, digital signaturing, and secure database structures, the records contained within a WAF card arrangement may be accepted as valid transaction records for government and/or corporate recordkeeping requirements. In some embodiments of the present invention a WAF card may employ docking station and/or electronic appliance storage means and/or share other WAF arrangement means local to said appliance and/or available across a network, to augment the information storage capacity of the WAF card, by for example, storing dated, and/or archived, backup information. Taxes relating to some or all of an individual's financial activities may be automatically computed based on "authentic" information securely stored and available to said WAF card. Said information may be stored in said card, in said docking station, in an associated electronic appliance, and/or other device operatively attached thereto, and/or remotely, such as at a remote server site. A card's data, e.g. transaction history, can be backed up to an individual's personal computer or other electronic appliance and such an appliance may have an integrated WAF installation of its own. A current transaction, recent transactions (for redundancy), or all or other selected card data may be backed up to a remote backup repository, such a WAF compatible repository at a financial clearinghouse, during each or periodic docking for a financial transaction and/or information communication such as a user/merchant transaction. Backing up at least the current transaction during a connection with another party's WAF installation (for example a WAF installation that is also on a financial or general purpose electronic network), by posting transaction information to a remote clearinghouse and/or bank, can ensure that sufficient backup is conducted to enable complete reconstruction of WAF card internal information in the event of a card failure or loss.

Detailed Description Paragraph Table (1):

1.1 Business1 (www.business1.com) Business1 offers a variety of products in the hardware, networking, architecture, infrastructure, security and development tool areas. These products are used as the foundation to build applications and systems. Business1 offers limited products with out-of-the-box functionality or application capabilities. Product Functionality Product Name/Category Product Details
Application A platform for the development, delivery and management of enterprise Server network applications. Based on CORBA and Java, Product1 uses an open and secure architecture to develop vusiness applications. The Product1 product family consists of the following components: .cndot. Product1 Studio - a visual integrated development environment tool for developing Java-based applications in Product1 and Java. It incorporates wizards and editors for creating web-based applications,

including construction of user interface, data access and PACs. It also integrates with source code control, testing and deployment tools. .cndot. Product1 Application Server - a Java- and CORBA-based server that provides state and session management, built-in load balancing, processing of application logic and integration with external databases and enterprise systems. .cndot. Product1 Java Object Framework - a framework of reusable Java and JavaBeans objects. A host of Product1 Java classes and methods are available out-of-the-box for custom development. .cndot. Product1 Command Center - a Java-based application that provides local and remote management and monitoring of the platform in real- time. This management console provides control of the application server, with the ability to configure a range of properties for each server component and the processes within them. It can also distribute components across multiple systems and manage multiple configurations. The Product1 product family may be extended through these components: .cndot. PAC SDK -- Product1 platform that allows developers to build customized Platform Adapter Components (PACs) for external enterprise systems. .cndot. PACs -- Business1 provides a PAC for SAP and PeopleSoft. Business1 partners deliver other 3rd party PACs that can be purchased from partners directly. Internet Mail A family of Internet mail server products that securely handles mail messages Server (SIMS) in a variety of formats. SIMS also provides a secure Java Administration Console for centralized and remote administration, backup and restore features. SIMS is a replacement for the UNIX sendmail program which has been the target of frequent system break-ins. Internet News Targeted for internet service providers, the Internet News Server is a full-Server featured news server which offers user-focused interfaces, streamed feeder/reader design, web-based installation and administration and remote access. The Internet News Server is a component of the Product2 ISP Server suite. Forum Workgroup collaboration tools that allow users to communicate in a heterogeneous environment of Business1 workstations, PCs and Macintosh computers. Forum allows users to share a whiteboard and applications with others and seamlessly transfer files and "chat" with co-workers. Personal Personal WebAccess -- a customizable, compact web browser for devices that WebAccess run the PersonalJava platform. Personal Web Access is designed for Browser manufacturers who want to provide consumers with an easy way to access the Web and retrieve information from a variety of consumer devices, including screen phones, set-top boxes, and wirelss hand-held devices. The browser supports common internet services such as authentication, FTP, applets, audio and media files. HotJava HotJava Browser - a lightweight, customizable browser designed for OEMs Browser and developers who create web-enabled devices and applications. Product3 A secure, standards-based web server for accessing, managing, and distributing information over the Internet, extranets, or intranets. Product3 supports Java servlet development and network caching of web pages. Product3 simplifies management of website environments through delegation of administrative privileges such as access rights to administer meta-data components or load-balancing. Java Web Server The first commercially available Java service based on the JavaServer API framework for Java servlets. It uses servlet technology to enable server-side Java applications and provides session tracking that provides a mechanism to track how people use and navigate websites. It also provides remote administration and logging features. Directory A multi-protocol, scalable global directory for storing information such as user Services definitions, user profiles, network resource definitions, and configuration parameters. It employs naming, directory, and authentication protocols on top of a shared, distributed, object repository. Users and applications can use the directory to locate and access information from anywhere in the network. JavaWallet Java Electronic Commerce Framework (JECF) is Business1's new initiative to create a standard, secure framework within which to conduct business transactions using any combination of currencies and payment instruments such as credit and debit cards, electronic cash and checks, and smart cards. The initial component of the JECF is the JavaWallet, a client-side application that will be distributed as a core component of the Java environment. JavaWallet will allow users of any Java-enabled web browser or operating system to purchase goods and services from JECF-compliant merchant websites. JavaWallet provides a single

user interface for electronic transactions, secure from tampering. When a consumer uses a Java-enabled browser to navigate an online mall, selects goods and services for purchase, he can access the JavaWallet for home banking and portfolio management. The consumer owns the JavaWallet that will be used to complete purchases and banking transactions. The user may set spending limits and can monitor spending through an auditable transaction log. Privacy of all data is protected through the use of encryption and digital signatures. Merchants offer goods and services for sale on the Internet using applets which adhere to the JavaWallet architecture. These applets may include interfaces to payment processing, security services, customer profile services and database services. The Java Wallet family consists of the following components: .cndot. Java Commerce Business (JCC) -- a client side solution for eCommerce transactions. JCC provides users with a wallet-like user interface, a database, and a platform that enables a variety of payment instruments and protocols. .cndot. Commerce JavaBeans - enables developers to write components to extend JCC functionality such as interfacing with payment servers and other transaction protocols. .cndot. Gateway Security Model -- allows a secure shield around protected APIs and components. Java Card A card that is embedded with either a microprocessor and a memory chip or only a memory chip with non-programmable logic. The microprocessor card can add, delete, and otherwise manipulate information on the card, while a memory-chip card can only undertake a pre-defined operation. echeck Server A server that allows the use of electronic checks for transactions. Business1 echeck server verifies digital signatures, processes checks according to the business rules of the bank (e.g. a check over \$25,000 requires two signatures), returns invalid checks, and settles all valid checks. Product4 Product A range of security-based hardware and software that offers packet filtering, Suite encryption, security administration, virtual private network and access restriction. The Product4 Product Suite includes the following components: .cndot. Product4 Secure Net -- a complete set of products designed to establish perimeter defense, secure intranets, secure remote access, and secure extranets including the following: .cndot. Product4 EFS - firewall and security server software that screens network traffic as defined by the organization's security policy. It also acts as a high-speed encryption server to protect information going over untrusted networks. .cndot. Product4 SPF-200 - security platform for perimeter defense and electronic commerce. It provides stealthing to help protect an organization from Internet attacks. .cndot. Product4 SKIP - provides encryption and key management capabilities which enables PCs, workstations, and servers to achieve secure/authenticated communication. Business1.net A remote-access strategy and technology that enables users to securely access all personalized data, application and information from Java-enabled browsers. Business1.net uses recently acquired i-Planet's secure, remote access software. Calendar Server Designed to manage large-scale enterprise calendaring systems, Business1's Calendar Server is integrated with Business1 Internet Mail Server and provides the following features: .cndot. Maintenance of Personal Calendars .cndot. Group Scheduling .cndot. Calendar Security Product5 Internet A web server package solution that includes

Detailed Description Paragraph Table (2):

third-party Internet and security Server Software products including the following: Bundle .cndot. Product5 Administration Software - provides server setup, configuration, and management capabilities through a browser. The Product5 Internet Server can be administered remotely for user access control, email management, software installation and backup and recovery. .cndot. Checkpoint FireWall-First! - firewall and security software that protects data and network from unauthorized access from the public Internet. It also offers packet-level filtering. .cndot. Trend Interscan VirusWall - virus scanning software that verifies and filters out viruses in communications such as files and emails that interact with the Product5 Internet Server. .cndot. Business1 Internet Mail Server - a family of Internet mail server products that securely handles mail messages in a variety of formats. .cndot. Network Associates WebStalker-First Intrusion Detection- software that provides around-the-clock monitoring and response to intrusions and misuse of a

site and its files. .cndot. Business2 SuiteSpot Server including Business2's Calendar, Chat, Enterprise, Messaging and Directory Servers, LiveWire Pro and Product2 ISP Server Targeted for internet service providers, Business1's Product2 ISP Server Bundle provides users with a bundle of platform extensions including the following: .cndot. Internet Administrator -- provides secure, remote management of distributed ISP services .cndot. Internet Services Monitor - monitors Internet services, identifies and manages network problems .cndot. Directory Services -- provides a multi-protocol, global directory for storing information .cndot. Host Configuration - provides ISP host configuration features including quick, repeatable installation, Product2 security configuration, intrusion detection, server process monitoring, and log file management. .cndot. Product4 SKIP -- provides encryption and key management capabilities which enables PCs, workstations, and servers to achieve secure/authenticated communication Network .cndot. Product2 Bandwidth Manager -- a software product that enables efficient Management network resource management. By preventing a small number of Tools applications or users from consuming all available bandwidth, it ensures the quality of service to users and network availability to applications. .cndot. Product6 Enterprise Manager - Business1's distributed network management foundation that manages large heterogeneous networks. Product6 Enterprise Manager supports and manages Java applications built for various network types. .cndot. Product6 Site Manager & Product6 Domain Manager - offer centralized management for networks of up to 100 nodes. Product features include the following: .cndot. Monitoring of events and network health for multiple local and remote environments .cndot. Distribution of management data .cndot. Management of file systems, print queues and user groups .cndot. Balancing of management processing loads across the network Development and Business1 offers a variety of development and testing tools including the Testing Tools following: Development Tools: .cndot. EmbeddedJava Application Environment .cndot. JavaBeans Development Kit .cndot. JavaBlend .cndot. Java Compiler Compiler .cndot. Java Development Kit .cndot. Java Dynamic Management Kit (JDMK) .cndot. JavaHelp .cndot. Java Management API (JMAPI) .cndot. Java JIT Compiler .cndot. Java SDK .cndot. Java WorkShop .cndot. NEOWorks .cndot. Personal Java Application Environment .cndot. Servlet Development Kit .cndot. Product6 ASN.1 Compiler .cndot. Business1 Performance Workshop Fortran .cndot. Business1 Visual WorkShop C++ .cndot. Business1 Workshop Teamware Testing Tools: .cndot. JavaCheck .cndot. Java Heap Analysis Tool .cndot. JavaPureCheck .cndot. JavaScope .cndot. JavaSpec .cndot. JavaStar .cndot. JavaLoad System .cndot. JavaPC Software - provides central administration and support for the Java Management platform on PC-based thin client devices. JavaPC is targeted at OEMs Tools designing thin-client devices such as transaction terminals, cash registers, kiosks and ATMs. .cndot. Product2 Management Console - Java-based utility that provides views of servers on the network and applications on those servers. It allows administrators to add users, hosts or applications from any client on the network. .cndot. Product6 Backup - provides automated, backup, recovery and storage management services for files and applications in a wide array of systems on the network including UNIX, NetWare, Windows NT, PC or Apple Macintosh systems. It also provides centralized administration and control through a unified view. .cndot. Product6 AdminSuite -- suite of tools for administering distributed systems and managing user accounts, hosts, groups, administrative data, printer, file system, disk and serial ports. .cndot. Product5 j Software - browser-based graphical administration tool that provides centralized administration of JavaStation network computers and Java Webtops on PCs. Product 5 j provides Java technology clients with connectivity to legacy databases and applications. .cndot. Business1 Product7 - host-based software used to monitor and administer tape libraries via a Java-enabled Web browser. The Library Monitor allows event logging and notification, remote diagnostics, remote configuration, and remote monitoring of library activity and status. 1.2 Business2 (www.business2.com) Business2 Communications offer a variety of server products that support the development and deployment of Internet applications. Business2 also provides applications with out-of-the-box functionality such as electronic commerce. Product Name/Category Product Details Business2 A suite of pre-built applications that run on Business2's Application

Server. Commerce These applications include buying, selling, merchandising, and delivering Product1 content over the Internet: .cndot. ECProduct1 - Software for the integration of eCommerce applications with legacy systems. It provides for the sending, receiving, and encrypted transmission of documents among heterogeneous systems of trading partners over the Internet. .cndot. SellerProduct1 - An application designed to support advanced business- to-business selling over the Internet. SellerProduct1 allows for the enforcement of trading partner agreements and business rules. SellerProduct1 provides the capability to create company-specific catalogs which can be set up to present different products to different users based upon purchase eligibility. SellerProduct1 includes search features, management tools, and order management (including tax, shipping, and payment services.) .cndot. BuyerProduct1 - An Internet- based corporate procurement application that automates order and delivery, supports complex trading relationships, and allows for the exchange of information via EDI or the Internet. .cndot. PublishingProduct1 - An application that utilizes both passive and active customer profiling capabilities to create targeted advertising, and to deliver personalized information for superior customer service. Content management tools are combined with application development tools to allow to host and deploy multiple sites. .cndot. MerchantProduct1 - An online business-to-consumer merchandising solution that provides the following features: .cndot. A single shopping cart for each customer, forms filled with predefined account information, tax calculation and discounts, product availability, and up-to-date order status information. .cndot. Payment systems, catalog creation and administration tools, an order management system, and rapid customization of a site's business processes through modifiable business rules and presentation templates. .cndot. Search capabilities, including hierarchical menus, parametric searches by attribute, and simple keyword searches. .cndot. BillerProduct1 - An Internet bill presentment and payment (IBPP) solution, particularly for the banking and telecommunications industries. .cndot. TradingProduct1 - A commerce exchange application that enables trading partners of varying size and technical sophistication to transact business over the Internet through in-context document turnaround capabilities, and customizable prepackaged forms. Business2 Product A comprehensive set of components that integrates browsing, email, web-based word processing, chat, and group scheduling to allow users to communicate, share, and access information. Business2 Product2 includes:

Detailed Description Paragraph Table (3):

.cndot. Product3 - web browser with support for Java, JavaScript, and SSL .cndot. Product4 - an Internet mail client. .cndot. Product5 - a web authoring tool. .cndot. Instant Product4 - enables people to communicate easily and privately in real time over an intranet or the Internet, either on-on-one or in a group. .cndot. Calendar - delivers group scheduling based on a scalable real-time architecture. Browser Customization .cndot. Business2 Business Customization Kit - enables Internet service providers, Internet content providers, hardware OEMs, and others to create customized versions of Product2. .cndot. Business2 Mission Control Desktop - cross-platform administration tools to configure, deploy, centrally manage, and update Business2 Product2. Business2 A high-performance, scalable web server software for deploying the largest- Enterprise Server scale web sites. Business2 Enterprise Server includes a built-in search engine and supports standard security and authentication. The integrated LiveWire Pro software also adds content management, data access, and session management capabilities. Business2 also offers FastTrack Server - an entry-level enterprise server with limited functionality. Business2 A middleware infrastructure that supports the development and deployment of Application transactional, business-critical Internet applications. Business2 Application Server Server operates with other Business2 products and includes the following two development tools: .cndot. Application Builder - provides an integrated and productive web development environment that enables developers to rapidly deliver enterprise-class web applications. .cndot. Extension Builder - allows corporations to develop custom integration with heterogeneous systems and applications across the enterprise. Business2 Directory A directory server that

acts as the central repository for customer, supplier and Server employee information. Business2 Directory Server enables the integration, storage and management of directory information from disparate data sources. It also provides security, authentication and replication features. A Directory Software Developer's Kit provides application programming interfaces that enable developers to directory-enable their applications. Business2 Proxy A system for caching and filtering web content, log analysis, and boosting Server network performance. Business2 Calendar A calendar server that supports the scheduling of meetings, appointments, and Server resources for thousands of users. Business2 Chat A newsgroup server that provides collaboration services through discussion Server groups. Business2 Chat Server also supports the moderation of content and administration of discussion groups. Business2 An email server that delivers messages with embedded sound, graphics, video Messaging Server files, HTML forms, Java applets, and desktop applications. Other Directory Business2 sells a range of products that provide a user and security & Security management infrastructure for large-scale eCommerce, extranet, and intranet Products applications. .cndot. Business2 Certificate Management System - issues and manages digital certificates for extranet and e-commerce applications. .cndot. Business2 Directory for Secure E-Commerce - expands the capabilities of Business2 Directory Server to provide additional flexibility of user and security administration for large-scale commerce and extranet applications. .cndot. Business2 Delegated Administrator - provides customizable self- service administration for customers and partners to manage their own user and account information. .cndot. Business2 Meta-Directory - enables Business2 Directory Server to be automatically synchronized with relational databases as well as network operating system, messaging, and enterprise resource planning system directories .cndot. Business2 Security Services - enables developers to incorporate standard Internet security technologies into applications. Other Business2 .cndot. Process Manager - Enables enterprises to automate and modify business Products processes such as contract negotiation, bidding and contractor management. Business2 Process Manager supports the development and deployment of processes across extranets and intranets, and manages them for overall efficiency and precision. Process Manager has four components: .cndot. Business2 Process Manager Builder - a visual design environment for designing business processes using intuitive features such as drag-and-drop functionality and pick lists. Processes may be stored in Business2's Directory Server. .cndot. Business2 Process Manager Engine - the server-based engine that hosts processes designed with PM Builder. .cndot. Business2 Process Manager Express - browser-based user interface to Process Manager business processes. .cndot. Business2 Process Manager Administrator - browser-based interface for centrally managing Process Manager business processes. .cndot. Compass Server - A profiling server that offers search, browser and profiling capabilities to help administrators gather and organize enterprise resources scattered across intranets so that users can find and retrieve information more efficiently. .cndot. Media Server - An audio publishing, broadcasting, and receiving system that enables the creation and delivery of media-rich information, both inside and outside the enterprise. Media server includes four components: .cndot. Media Server - play real-time audio feels, provide on-demand access to pre-recorded audio clips, and synchronize audio with HTML documents, Java applets, and JavaScript applications. .cndot. Media Proxy Server - a transparent intermediary between Media Player and Media Servers which provides safe passage through the firewall for audio connections and operates as a reverse-proxy outside a firewall. .cndot. Media Converter - compresses and converts different audio formats. .cndot. Media Player - a plug-in needed to access audio files or a live feed from a Media Server. 1.3 Business3 (www.business3.com) Business3 primarily provides Internet services for web users. It offers a variety of services including internet access, portal sites, links to online shopping, and chatting. Business3 offers a very limited set of Internet products as it focuses on providing Internet services. Product Name/Category Product Details Business3 A software application that allows Business3 users to access their Business3 NetMail mail through a standard web browser without any Business3 software. Business3press A web publishing tool which

may be published to any web server. Business3press offers the following capabilities: .cndot. WYSIWYG editing .cndot. Simple interfaces for creating forms and image maps .cndot. Integrated browsing and editing simultaneously .cndot. "Check Links" function to fix broken links .cndot. Database interaction .cndot. Permissions setting .cndot. Work archive .cndot. MiniWeb - site management tool that provides graphical overview of website structure. It provides a mechanism to save or move multiple pages while maintaining appropriate links. Business3server A multi-threaded web and publishing server that provides the following capabilities: .cndot. Serves HTML pages and other media files .cndot. Runs CGI scripts and processes server-side includes .cndot. Platform for dynamic web applications: Business3server Dynamic Pages (ADPs) .cndot. Supports Business3server's C and Tcl scripting and APIs .cndot. Supports database connectivity .cndot. Allows users to edit content across the network with Business3press or other authoring tools .cndot. Provides C API plug-in that can be used to serve and rotate web advertisements, as on Business3's site. .cndot. Supports simultaneous connections through multi-threading and in- memory caching .cndot. Supports site administration tasks including account management, document management (automatic version control and archiving), link management, and access control .cndot. Web-based server and page administration .cndot. Provides support for Art Technology Group's Dynamo server Business3server is used extensively on Business3's sites and a number of other Internet sites including the following: primehost.com, Business3.com, digitalcity.com, tile.net, am.net, worldpages.com. Client3 Instant A software application that provides online chatting capabilities, directory Product1 services for user profiles, and personalized news. Client3 Browser A browser based upon Microsoft's Internet Explorer which supports common internet services such as graphics, sound, meta-tags, plug-ins, security, FTP, HTTP. Client3 Client A software application installed on end-user's machines to obtain access to Business3's private network. Business3 Business communicates with a host in Virginia through a proprietary protocol. Client3 Caching A server software that determines if a web page object should be cached and

Current US Original Classification (1):

705/14

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WEST**End of Result Set**☐ **Generate Collection** **Print**

L1: Entry 1 of 1

File: USPT

Jun 29, 1999

US-PAT-NO: 5918213

DOCUMENT-IDENTIFIER: US 5918213 A

TITLE: System and method for automated remote previewing and purchasing of music, video, software, and other multimedia products

DATE-ISSUED: June 29, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bernard; Warren E.	Bethesda	MD		
Jacobson; Philip A.	Vienna	VA		

US-CL-CURRENT: 705/26; 705/27, 709/227, 709/228, 709/229

ABSTRACT:

An automated product purchasing system allows purchasers to order products via a remote communications medium without having to speak to a sales representative or other human operator. According to the invention, purchasers access the automated product purchasing system and browse among the selections offered. Menu style prompts guide the customer through the various products offered by the automated product purchasing system. Product descriptions are provided to assist the customer in making his or her selections. Where appropriate, product samples are provided to the customer via the communications medium so the customer can evaluate the product prior to purchasing. Examples of product samples include movie previews, sample cuts from music tracks, software demos, and the like. Ordering and purchasing are automated so that human operators are not required to intervene in the process. The use of a membership profile with important customer information facilitates the automation of the process and minimizes the amount of times a repeat customer needs to provide this information.

40 Claims, 47 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 45

WEST☐ Generate Collection☐ Print

L2: Entry 1 of 2

File: USPT

May 1, 2001

US-PAT-NO: 6226675

DOCUMENT-IDENTIFIER: US 6226675 B1

TITLE: Participant server which process documents for commerce in trading partner networks

DATE-ISSUED: May 1, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Meltzer; Bart Alan	Aptos	CA		
Davidson; Andrew Everett	Boulder Creek	CA		
Fuchs; Matthew Daniel	Los Gatos	CA		
Glushko; Robert John	San Francisco	CA		
Persson; Kenneth	Santa Cruz	CA		
Schwarzhoff; Kelly Lane	Palo Alto	CA		

US-CL-CURRENT: 709/223; 370/466, 705/26, 709/230, 715/513

ABSTRACT:

Participant servers in a network of customers, suppliers and other trading partners exchange machine readable documents. The participants in the network use self defining electronic documents, such as XML based documents, which can be easily understood amongst the partners. Definitions of the electronic business documents, called business interface definitions, are posted on the Internet, or otherwise communicated to members of the network. The business interface definitions tell potential trading partners the services the company offers and the documents to use when communicating with such services. Thus, a typical business interface definition allows a customer to place an order by submitting a purchase order or a supplier checks availability by downloading an inventory status report. Participants are programmed by the composition of the input and output documents, coupled with interpretation information in a common business library, to handle the transaction in a way which closely parallels the way in which paper based businesses operate.

49 Claims, 16 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 16

WEST**End of Result Set**☐ **Generate Collection** **Print**

L2: Entry 2 of 2

File: USPT

Sep 7, 1999

US-PAT-NO: 5950173

DOCUMENT-IDENTIFIER: US 5950173 A

TITLE: System and method for delivering consumer product related information to consumers within retail environments using internet-based information servers and sales agents

DATE-ISSUED: September 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Perkowski; Thomas J.	Darien	CT		

US-CL-CURRENT: 705/26; 235/375, 379/93.12, 705/27, 709/219

ABSTRACT:

A system and method are disclosed for finding and serving consumer product-related information over the Internet to consumers in retail shopping environments, as well as at home and work, and on the road. The system includes Internet information servers which store information pertaining to Universal Product Number (e.g. UPC number) preassigned to each consumer product registered with the system, along with a list of Uniform Resource Locators (URLs) that point to the location of one or more information resources on the Internet, e.g. World Wide Web-sites, which related to such registered consumer products. Upon entering the UPC number into the system using a conventional Internet browser program running on any computing platform or system, the menu of URLs associated with the entered UPC number is automatically displayed for user selection. The displayed menus of URLs are categorically arranged according to specific types of product information such as, for example: product specifications and operation manuals; product wholesalers and retailers; product advertisements and promotions; product endorsements; product updates and reviews; product warranty/servicing; related or complementary products; product incentives including rebates, discounts and/or coupons; manufacturer's annual report and 10K information; electronic stock purchase; etc. Web-based techniques are disclosed for collecting the UPC/URL information from manufacturers and transmitting the same to the Internet-based databases of the system.

7 Claims, 18 Drawing figures

Exemplary Claim Number: 2

Number of Drawing Sheets: 16

WEST☐ Generate Collection☐ Print

L1: Entry 1 of 4

File: USPT

Jul 31, 2001

US-PAT-NO: 6269446

DOCUMENT-IDENTIFIER: US 6269446 B1

**** See image for Certificate of Correction ****

TITLE: Authenticating images from digital cameras

DATE-ISSUED: July 31, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schumacher; Thomas	Cupertino	CA		
Kohler; Timothy L.	San Jose	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Canon Kabushiki Kaisha	Tokyo			JP	03

APPL-NO: 09/ 105046 [PALM]

DATE FILED: June 26, 1998

INT-CL: [07] H04 L 9/32, H04 L 9/30

US-CL-ISSUED: 713/176; 713/179, 713/181, 380/30

US-CL-CURRENT: 713/176; 380/30, 713/179, 713/181

FIELD-OF-SEARCH: 713/160, 713/161, 713/162, 713/176, 713/177, 713/178, 713/179, 713/181, 380/30, 380/179, 380/234, 380/279

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5005200</u>	April 1991	Fischer	380/30
<input type="checkbox"/>	<u>5027401</u>	June 1991	Soltesz	380/54
<input type="checkbox"/>	<u>5499294</u>	March 1996	Friedman	380/10
<input type="checkbox"/>	<u>5579393</u>	November 1996	Conner et al.	380/25
<input type="checkbox"/>	<u>5629981</u>	May 1997	Nerlikar	380/25
<input type="checkbox"/>	<u>5659617</u>	August 1997	Fischer	380/25
<input type="checkbox"/>	<u>5712914</u>	January 1998	Aucsmith et al.	380/30
<input type="checkbox"/>	<u>5787172</u>	July 1998	Arnold	380/21
<input type="checkbox"/>	<u>5799083</u>	August 1998	Brothers et al.	380/20
<input type="checkbox"/>	<u>6105134</u>	August 2000	Pinder et al.	713/170
<input type="checkbox"/>	<u>6111953</u>	August 2000	Walker et al.	380/51

OTHER PUBLICATIONS

"Introduction to Message Privacy",
<<http://www.pgp.com/privacy/intro-priv.cgi#mpriv-digsigs>>, 6 pages, (visited Dec. 17, 1997).

ART-UNIT: 212

PRIMARY-EXAMINER: Swann; Tod

ASSISTANT-EXAMINER: Darrow; Justin T.

ATTY-AGENT-FIRM: Fitzpatrick, Cella, Harper & Scinto

ABSTRACT:

Authentication of image from digital cameras with GPS-derived time and location data is disclosed. With the wide-spread availability of today's desktop tools and imaging devices, unethical manipulation of digital image data is common, such that digital images are not ordinarily reliable and can be subject to trickery and forgery. In the past, imagery such as photographs and digital images were reliable enough to serve as documentary evidence in most cases, since a skilled craftsman was needed to modify the images and commit fraud. However, skilled craftsmen are no longer needed, and digital images can be modified by even a casual user. Moreover, time data and location data are not ordinarily included in digital images. According to the invention, a digital camera system documents the time, date and location where a digital image was taken, using GPS-derived data from a secure connection. The validity and authenticity of the digital image, as well as the time data and location data, is then protected with a public key signature system that provides a digital signature by which the image and time and location information can be authenticated.

59 Claims, 5 Drawing figures

WEST☐ Generate Collection☐ Print

L1: Entry 2 of 4

File: USPT

May 1, 2001

US-PAT-NO: 6226675

DOCUMENT-IDENTIFIER: US 6226675 B1

TITLE: Participant server which process documents for commerce in trading partner networks

DATE-ISSUED: May 1, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Meltzer; Bart Alan	Aptos	CA		
Davidson; Andrew Everett	Boulder Creek	CA		
Fuchs; Matthew Daniel	Los Gatos	CA		
Glushko; Robert John	San Francisco	CA		
Persson; Kenneth	Santa Cruz	CA		
Schwarzhoff; Kelly Lane	Palo Alto	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Commerce One, Inc.	Cupertino	CA			02

APPL-NO: 09/ 173847 [PALM]

DATE FILED: October 16, 1998

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS The present application is related to co-pending U.S. patent application Ser. No. 09/173,858, filed on Oct. 16, 1998, the same day as the present application, and having the same inventors, entitled DOCUMENTS FOR COMMERCE IN TRADING PARTNER NETWORKS AND INTERFACE DEFINITIONS BASED ON THE DOCUMENTS, still pending; and to co-pending U.S. patent application Ser. No. 09/173,854, filed on Oct. 16, 1998, the same day as the present application, and having the same inventors, entitled MARKET MAKERS USING DOCUMENTS FOR COMMERCE IN TRADING PARTNER NETWORKS, now U.S. Pat. No. 6,125,391.

INT-CL: [07] G06 F 13/00

US-CL-ISSUED: 709/223; 707/513, 705/26, 709/230, 370/466

US-CL-CURRENT: 709/223; 370/466, 705/26, 709/230, 715/513

FIELD-OF-SEARCH: 705/26, 709/223, 709/230, 707/513, 370/466

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5742845</u>	April 1998	Wagner	710/11
<input type="checkbox"/>	<u>6012098</u>	January 2000	Bayeh et al.	709/246

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 704 795 A1	April 1996	EP	
WO 98/34179	June 1998	WO	

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Dudeck, J., "Aspects of implementing and harmonizing healthcare communication standards", Intl. Journal of Medical Informatics, vol. 48, No. 1-3, Elsevier Publications, Feb. 1, 1998, pp. 163-171.

Kristensen, A., "Template resolution in XML/HTML", Computer Networks and ISDN Systems, vol. 30, No. 1-7, North Holland Publishing, Amsterdam, Apr. 1, 1998, pp. 239-249.

Liechti, O. et al., "Structured graph format: XML metadata for describing Web site structure", Computer Networks and ISDN Systems, vol. 30, No. 1-7, North Holland Publishing, Amsterdam, Apr. 1, 1998, pp. 11-21.

"W3C: Extensible Markup Language (XML) 1.0--W3C Recommendation Feb. 10, 1998", <http://www.w3.org/TR/1998/REC-xml-19980210>, Printed from Internet Feb. 17, 1998, pp. 1-37.

Kimbrough, et al., "On Automated Message Processing in Electronic Commerce and Work Support Systems: Speech Act Theory and Expressive Felicity", ACM Transactions on Information Systems, Vo. 15, No. 4, Oct. 1997, pp. 321-367.

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Finin, et al., "KQML as an Agent Communication Language", Association of Computing Machinery, 1994, pp. 456-463.

Tenenbaum, et al., "Eco System: An Internet Commerce Architecture", IEEE, May 1997, pp. 48-55.

"The Internet: Untangling the Web", The Economist, Apr. 25, 1998, p. 80 [no author].

ART-UNIT: 214

PRIMARY-EXAMINER: Coulter; Kenneth R.

ATTY-AGENT-FIRM: Wilson Sonsini Goodrich & Rosati

ABSTRACT:

Participant servers in a network of customers, suppliers and other trading partners exchange machine readable documents. The participants in the network use self defining electronic documents, such as XML based documents, which can be easily understood amongst the partners. Definitions of the electronic business documents, called business interface definitions, are posted on the Internet, or otherwise communicated to members of the network. The business interface definitions tell potential trading partners the services the company offers and the documents to use when communicating with such services. Thus, a typical business interface definition allows a customer to place an order by submitting a purchase order or a supplier checks availability by downloading an inventory status report. Participants are programmed by the composition of the input and output documents, coupled with interpretation information in a common business library, to handle the transaction in a way which closely parallels the way in which paper based businesses operate.

49 Claims, 16 Drawing figures

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L1: Entry 3 of 4

File: USPT

Sep 7, 1999

US-PAT-NO: 5950173

DOCUMENT-IDENTIFIER: US 5950173 A

TITLE: System and method for delivering consumer product related information to consumers within retail environments using internet-based information servers and sales agents

DATE-ISSUED: September 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Perkowski; Thomas J.	Darien	CT		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
IPF, Inc.	Darien	CT			02

APPL-NO: 08/ 854877 [PALM]

DATE FILED: May 12, 1997

PARENT-CASE:

RELATED CASES This is a Continuation-in-Part of copending application Ser. No. 08/826,120 entitled "System And Method For Collecting Consumer Product Related Information And Transmitting And Delivering The Same Along The Retail Supply And Demand Chain Using The Internet" filed Mar. 27, 1997, which is a Continuation of Ser. No. 08/752,136 entitled "System And Method For Finding Product and Service Related Information On The Internet" filed Nov. 19, 1996; which is a Continuation-in-Part of copending application Ser. No. 08/736,798 entitled "System And Method For Finding Product and Service Related Information On The Internet" filed on Oct. 25, 1996; each said Application being incorporated herein by reference in its entirety as if set forth fully herein.

INT-CL: [06] G06 F 17/60, G06 F 17/00

US-CL-ISSUED: 705/26; 705/27, 235/375, 395/200.49, 379/93.12

US-CL-CURRENT: 705/26; 235/375, 379/93.12, 705/27, 709/219

FIELD-OF-SEARCH: 705/1, 705/16, 705/17, 705/21, 705/26, 705/27, 235/375, 235/376, 235/385, 235/454, 235/462, 395/200.31, 395/200.33, 395/200.47, 395/200.49, 379/93.12

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

☐ Search Selected☐ Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4654482</u>	March 1987	DeAngelis	379/93.12
<input type="checkbox"/>	<u>5640193</u>	June 1997	Wellner	348/7

ART-UNIT: 271

PRIMARY-EXAMINER: Tkacs; Stephen R.

ATTY-AGENT-FIRM: Perkowski, Esq., P.C.; Thomas J.

ABSTRACT:

A system and method are disclosed for finding and serving consumer product-related information over the Internet to consumers in retail shopping environments, as well as at home and work, and on the road. The system includes Internet information servers which store information pertaining to Universal Product Number (e.g. UPC number) preassigned to each consumer product registered with the system, along with a list of Uniform Resource Locators (URLs) that point to the location of one or more information resources on the Internet, e.g. World Wide Web-sites, which related to such registered consumer products. Upon entering the UPC number into the system using a conventional Internet browser program running on any computing platform or system, the menu of URLs associated with the entered UPC number is automatically displayed for user selection. The displayed menus of URLs are categorically arranged according to specific types of product information such as, for example: product specifications and operation manuals; product wholesalers and retailers; product advertisements and promotions; product endorsements; product updates and reviews; product warranty/servicing; related or complementary products; product incentives including rebates, discounts and/or coupons; manufacturer's annual report and 10K information; electronic stock purchase; etc. Web-based techniques are disclosed for collecting the UPC/URL information from manufacturers and transmitting the same to the Internet-based databases of the system.

7 Claims, 18 Drawing figures

WEST**End of Result Set**☐ **Generate Collection** **Print**

L1: Entry 4 of 4

File: USPT

Jun 29, 1999

US-PAT-NO: 5918213

DOCUMENT-IDENTIFIER: US 5918213 A

TITLE: System and method for automated remote previewing and purchasing of music, video, software, and other multimedia products

DATE-ISSUED: June 29, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bernard; Warren E.	Bethesda	MD		
Jacobson; Philip A.	Vienna	VA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
MCI Communications Corporation		DE			02

APPL-NO: 08/ 580104 [PALM]

DATE FILED: December 22, 1995

INT-CL: [06] G06 F 17/60

US-CL-ISSUED: 705/26; 705/27, 395/200.57, 395/200.58, 395/200.59

US-CL-CURRENT: 705/26; 705/27, 709/227, 709/228, 709/229

FIELD-OF-SEARCH: 364/41R, 364/478.01, 364/479.03, 235/381, 395/226, 395/227, 395/200.57, 395/200.58, 395/200.59, 705/26, 705/27

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

☐ **Search Selected**☐ **Search ALL**

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3082402</u>	March 1963	Scantlin	
<input type="checkbox"/>	<u>3159818</u>	December 1964	Scantlin	
<input type="checkbox"/>	<u>3249919</u>	May 1966	Scantlin	
<input type="checkbox"/>	<u>3371162</u>	February 1968	Scantlin	
<input type="checkbox"/>	<u>3381276</u>	April 1968	James	
<input type="checkbox"/>	<u>3482057</u>	December 1969	Abbott et al.	
<input type="checkbox"/>	<u>3829833</u>	August 1974	Freeny, Jr. et al.	

<input type="checkbox"/>	<u>3911397</u>	October 1975	Freeny, Jr. et al.
<input type="checkbox"/>	<u>3924065</u>	December 1975	Freeny, Jr.
<input type="checkbox"/>	<u>3928724</u>	December 1975	Byram et al.
<input type="checkbox"/>	<u>3946220</u>	March 1976	Brobeck et al.
<input type="checkbox"/>	<u>3970992</u>	July 1976	Boothroyd et al.
<input type="checkbox"/>	<u>4071698</u>	January 1978	Barger, Jr. et al.
<input type="checkbox"/>	<u>4071911</u>	January 1978	Mazur
<input type="checkbox"/>	<u>4112421</u>	September 1978	Freeny, Jr.
<input type="checkbox"/>	<u>4209787</u>	June 1980	Freeny, Jr.
<input type="checkbox"/>	<u>4217588</u>	August 1980	Freeny, Jr.
<input type="checkbox"/>	<u>4220991</u>	September 1980	Hamano et al.
<input type="checkbox"/>	<u>4232317</u>	November 1980	Freeny, Jr.
<input type="checkbox"/>	<u>4265371</u>	May 1981	Desai et al.
<input type="checkbox"/>	<u>4270182</u>	May 1981	Asija
<input type="checkbox"/>	<u>4300040</u>	November 1981	Gould et al.
<input type="checkbox"/>	<u>4328544</u>	May 1982	Baldwin et al.
<input type="checkbox"/>	<u>4414467</u>	November 1983	Gould et al.
<input type="checkbox"/>	<u>4494197</u>	January 1985	Troy et al.
<input type="checkbox"/>	<u>4517410</u>	May 1985	Williams et al.
<input type="checkbox"/>	<u>4528643</u>	July 1985	Freeny, Jr.
<input type="checkbox"/>	<u>4654482</u>	March 1987	DeAngelis
<input type="checkbox"/>	<u>4674044</u>	June 1987	Kalmus et al.
<input type="checkbox"/>	<u>4674055</u>	June 1987	Ogaki et al.
<input type="checkbox"/>	<u>4763191</u>	August 1988	Gordon et al.
<input type="checkbox"/>	<u>4785408</u>	November 1988	Britton et al.
<input type="checkbox"/>	<u>4792968</u>	December 1988	Katz
<input type="checkbox"/>	<u>4797911</u>	January 1989	Szlam et al.
<input type="checkbox"/>	<u>4797913</u>	January 1989	Kaplan et al.
<input type="checkbox"/>	<u>4799156</u>	January 1989	Shavit et al.
<input type="checkbox"/>	<u>4845739</u>	July 1989	Katz
<input type="checkbox"/>	<u>4852154</u>	July 1989	Lewis et al.
<input type="checkbox"/>	<u>4866756</u>	September 1989	Crane et al.
<input type="checkbox"/>	<u>4894857</u>	January 1990	Szlam et al.
<input type="checkbox"/>	<u>4908850</u>	March 1990	Masson et al.
<input type="checkbox"/>	<u>4930150</u>	May 1990	Katz
<input type="checkbox"/>	<u>4942616</u>	July 1990	Linstroth et al.
<input type="checkbox"/>	<u>4943995</u>	July 1990	Daudelin et al.
<input type="checkbox"/>	<u>4947028</u>	August 1990	Gorog

<input type="checkbox"/>	<u>4969183</u>	November 1990	Reese	
<input type="checkbox"/>	<u>4975945</u>	December 1990	Carbullido	
<input type="checkbox"/>	<u>4989233</u>	January 1991	Schakowsky et al.	
<input type="checkbox"/>	<u>4992940</u>	February 1991	Dworkin	
<input type="checkbox"/>	<u>5014298</u>	May 1991	Katz	
<input type="checkbox"/>	<u>5048075</u>	September 1991	Katz	
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<input type="checkbox"/>	<u>5224153</u>	June 1993	Katz	
<input type="checkbox"/>	<u>5251252</u>	October 1993	Katz	
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ART-UNIT: 271

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ABSTRACT:

An automated product purchasing system allows purchasers to order products via a remote communications medium without having to speak to a sales representative or other human operator. According to the invention, purchasers access the automated product purchasing system and browse among the selections offered. Menu style prompts guide the customer through the various products offered by the automated product purchasing system. Product descriptions are provided to assist the customer in making his or her selections. Where appropriate, product samples are provided to the customer via the communications medium so the customer can evaluate the product prior to purchasing. Examples of product samples include movie previews, sample cuts from music tracks, software demos, and the like. Ordering and purchasing are automated so that human operators are not required to intervene in the process. The use of a membership profile with important customer information facilitates the automation of the process and minimizes the amount of times a repeat customer needs to provide this information.

40 Claims, 47 Drawing figures